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In the Drawings

Please enter the enclosed twenty (20) sheets containing New Figures 1PA-21PA.

REMARKS

At the time of the Official Action, claims 27-40 and 43-54 were presented for examination. In the Office Action, all such claims have been rejected and an objection was made to the disclosure. In response, the specification is amended, claims 45-54 have been cancelled, claims 27, 32-33, 37, 39 and 43-44 have been amended, claims 55 and 56 are added, and reconsideration is requested.

Applicant will provide further remarks using, so far as possible, the same headings used by the Examiner.

Specification

The disclosure was objected to owing to informalities on pages 1 and 16. Suitable amendments have been made, as suggested by the Examiner. Spelling changes also have been made on page 1.

The Office Action also makes reference to 37 CFR 1.57(f) and requires amendment of the specification to include the material incorporated by reference to a foreign application or patent or publication. Due to the vagueness of this paragraph, Applicant can only assume that the Examiner intends to refer to references to PCT publication no. WO98/07141. The underlying PCT application, GB97/02159, designates the U.S. and, Applicant submits, should be adequate under 37 CFR 1.57(c) to supply "essential material" and certainly it is adequate under 37 CFR 1.57(d) to disclose non-essential material. A PCT application that designates the U.S. is, for most intents and purposes, a U.S. patent application as of its international filing date; it is merely in the international stage and has not entered the national stage of prosecution. Applicant should not have to amend his specification.

Nevertheless to advance the prosecution of the application and assure compliance with 37 CFR 1.57, which is new and has not yet been interpreted by the courts, Applicant has amended the specification to incorporate the entire specification of the Prior Application, and has amended page 1 to include a reference to this material. The material inserted in the specification under the heading "Prior Application" is the material previously incorporated by reference and no new matter is added.

Claim rejection - 35 USC §112

Claims 33, 44, 45, 48 and 50-53 were rejected under 35 USC 112, second paragraph, as indefinite. Claims 45-54 have been cancelled, mooting the rejection of claims 45, 48 and 50-53. That leaves only the rejection of claims 33 and 34. Such claims are amended herein to overcome the rejection.

The rejection states that the claims attempt to embrace both an apparatus or machine and a process, which is precluded by §101 of the statute. Dependent claim 33, it was stated, is a method claim that depends upon an apparatus claim 32. And claim 34 was stated to indicate an apparatus but refer to “step” limitations. As amended, claim 33 is strictly an apparatus claim, with no method language. Claim 44 is strictly an apparatus claim, with no method language. Reconsideration is therefore requested.

Claim rejections - 35 USC §101

Claims 33, 34, 52 and 53 also were rejected under §101 because of being directed to two classes of statutory subject matter. As stated above, claims 52 and 53 have been cancelled while claims 33 and 44 have been amended to recite only apparatus. Accordingly, reconsideration is requested.

Claim rejections - 35 USC §102

Claims 27-40 and 43-54 were rejected under §102(b) as anticipated by Wilson ‘651. Again, claims 45-54 have been cancelled and they will not be further treated. Otherwise, reconsideration is requested.

Wilson shows a device for operating on a live signal and compressing or amplifying it according to its input level. It simply uses a compression/amplification curve which is applied to the input signal to derive an ideal gain to apply to that signal. There is no teaching or suggestion of storing impulse responses. Claim 27 requires “multiplying the input signal by the thus determined gain characteristic and convolving the result with a stored impulse response.” Wilson does not teach, disclose or even suggest the idea of convolving with a stored impulse

response the value of the input signal after multiplication by the level of gain characteristic. Such an approach is taken in the current invention in order to simulate an original sampled device. Manifestly, this is a completely different idea than Wilson's, which is to attempt to mimic the adjustments that would be made by a studio manager when preparing an audio signal for transmission, by looking ahead at future peaks and troughs in the input signal and making gradual adjustments to the gain characteristic, in order to account for them.

Consequently, Wilson is clearly not relevant to the invention set forth in claims 27 and 32. The Office Action avoids confronting the quoted aspect of the claim language by asserting that "A gain characteristic, such as a particular gain level, inherently comprises an impulse response." Firstly, that statement is inaccurate. Impulse response relates to dynamic performance. Gain level is not necessarily so understood. Secondly, be that as it may, Wilson does not disclose *storing* any impulse responses and it does not disclose convolving a stored impulse response with the result of the aforementioned multiplication.

The rejection of anticipation of claims 27-36, 43 and 44 should, accordingly, be withdrawn.

With respect to independent claims 37 and 39, these claims have been amended to recite that the gain characteristics are from a "reference device." (In the specification, the term "device under test" is used to refer to the same element and page 2 is amended to so state.) With reference to paragraph 24 on page 10 of the Office Action, regarding claims 43 and 44, the Examiner has created from whole cloth a definition for the claim term "reference device", asserting that "Applicant has not provided any basis, either in the claims or the specification, for determining a specific meaning for the term." Thus, the Examiner concludes that Wilson's apparatus is inherently based on a conceptual "reference device." Applicant categorically disagrees with the Examiner's analysis and with his drafting of a definition. The aforesaid amendment to page 2 now makes it clear that "reference device" and "device under test" mean the same thing. Wilson does not, in this context, deal with a reference device.

The rejection of claims 37, 39, 43 and 44 should thus be withdrawn.

Next, claims 27-29, 31-34, 36-40, 44, 45, 47, 49-52 and 54 were rejected under 35 USC 102(e) as anticipated by Kitamura '502. Again, claims 45-54 have been cancelled and will not be further treated.

Kitamura relates to a device for altering the dynamic range of a number of different input devices, each having its own different dynamic range. This may be required if providing a plurality of different audio sources, all to be played back at different times through the same system, for example. As each source has its own dynamic range, the output of the system is altered according to the input source. This, again, seeks to solve a different problem than that of the present invention. The present invention has as its starting point, or a starting point, the idea of simulating forms of reference devices in different conditions. Thus, one skilled in the art would not understand Kitamura to anticipate or make obvious the claimed invention.

Kitamura does show a signal compression device with a choice of impulse responses. However, there is no stored gain data separate from the impulse responses. Therefore, Kitamura could not be used in the manner of the present invention, in which gain data is first applied to an input signal and then convolved with the impulse response. Consequently, Kitamura does not perform the method of claims 27 and 37. Neither does it have the totality of features of apparatus claims 32, 39 and 44.

The rejection, thus, should be withdrawn.

Claim rejections - 35 USC §103

Claims 30, 35, 43, 46, 48 and 53 also have been rejected as obvious over Kitamura in view of Bose et al '843. We shall address only the first three of these claims, as the others have been cancelled.

Claim 30 depends from claim 29 which, in turn, depends from claim 27. The rejection of claim 30 here is premised upon claims 27 and 29 being unpatentable. However, as discussed above, that premise is unfounded. The sole rejection of claim 27 has been overcome. The rejection of claim 30 is therefore moot.

With respect to claim 35, it will be observed that such claim depends from claim 34 and that claim 34, in turn, depends from claim 32. Accordingly, similar reasoning applies as to claim 30 and claim 35 is patentable as depending from an allowable claim:

Claim 43, on the other hand, is an independent claim. It specifies a method for applying an impulse response to an audio signal, involving steps of storing data representing a plurality of impulse responses relating to a plurality of characteristics of a reference device; using a manual input to select a stored impulse response to be applied to an input signal; and applying the selected stored impulse response to the input signal. Nothing in Katamura or Bose, alone or in combination, shows storing data representing a plurality of impulse responses relating to a plurality of characteristics of a reference device, selecting a stored impulse response, and applying the selected stored impulse response to the input signal.

This rejection, therefore, should be withdrawn.

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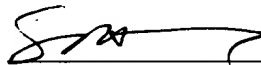
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Conclusion

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,



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